

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of the claims in the application:

1. (Currently amended) An apparatus for controlling operating features of a model train compliant with at least one of plural command protocols, comprising:

a switch permitting selection of one of said plural command protocols;

a plurality of selection devices each corresponding to a respective operating feature of said train;

a controller connected to said selection devices and said switch, said controller being operative to generate digital train command messages corresponding to said selection devices and formatted in accordance with a selected one of said plural command protocols; and

a transmitter connected to said controller operative to send said digital train command messages to a receiver located on said train.

2. (Currently amended) An apparatus in accordance with Claim 1, wherein said plurality of selection devices are include pushbuttons.

3. (Currently amended) An apparatus in accordance with Claim 1, wherein said ~~controller~~ transmitter is operative to ~~create said digital~~ send said train command messages using a frequency shift key modulation method, ~~and wherein said receiver is operative to decode said digital messages.~~

4. (Currently amended) An apparatus in accordance with Claim 1, wherein said transmitter is operatively connected between said controller and said track, and further wherein said transmitter transmits said train command ~~signals~~ messages to said track.

5. (Currently amended) An apparatus in accordance with Claim 4, further comprising a capacitor operatively connected between said transmitter and said track.

6. (Currently amended) An apparatus in accordance with Claim 1, ~~further comprising at a plurality of switches to control the form of said signals being transmitted to said train~~ wherein said train command messages further comprise digital signals.

7. (Currently amended) An apparatus in accordance with Claim 1, wherein said controller is operative to monitor the voltage being applied to said track by way of a voltage sensor, and to then generate and transmit corresponding speed command signals to said receiver on said train.

8. (Original) An apparatus in accordance with claim 7 wherein said controller is operative to repeat said speed command signals to said receiver by using a que technique.

9. (Original) An apparatus in accordance with Claim 1, wherein said controller is operative to generate and apply conventional DC Offsets to said track.

10. (Original) An apparatus in accordance with Claim 9, further comprising:
a first resistor connected to said controller, and a first transistor connected between said first resistor and a first switching device; and
a second resistor connected to said controller, and a second transistor connected between said second resistor and a second switching device;
wherein said first switching device, when actuated, connects a negative DC offset supply to said tracks, and wherein said second switching device, when actuated, connects a positive DC offset supply to said tracks.

11. (Currently amended) An apparatus in accordance with Claim 10 wherein said switching devices ~~are~~ include electromechanical relays.

12. (Currently amended) An apparatus in accordance with Claim 10 wherein said switching devices ~~are~~ include solid state devices.

13. (Original) An apparatus in accordance with Claim 1 further comprising a switching means for selecting between one of two of said trains that are operating on the same block of said track or between a first and second train operating on separate blocks.

14. (Currently amended) An apparatus in accordance with Claim 13 wherein said switching means ~~is~~ includes a pushbutton.

15. (Original) An apparatus in accordance with Claim 13 wherein said switching means is operative to actuate automatically to one of said trains whose speed is altered.

16. (Currently amended) An apparatus for controlling operating features of a model train compliant with at least one of plural command protocols, comprising:

a switch permitting selection of one of said plural command protocols;

a plurality of selection devices each corresponding to a different operating feature of said train;

a controller operatively connected to said selection devices and said switch, said controller being operative to generate DC offset signals corresponding to said selection devices in accordance with one of said plural command protocols wherein said signals are delivered to a track upon which said train is operating.

17. (Currently amended) An apparatus in accordance with Claim 16, wherein said plurality of selection devices are include push buttons.

18. (Original) An apparatus in accordance with Claim 16 further comprising:
a first resistor connected to said controller, and a first transistor connected between said first resistor and a first switching device; and

a second resistor connected to said controller, and a second transistor connected between said second resistor and a second switching device,

wherein said first switching device, when actuated, connects a negative DC offset supply to said tracks, and wherein said second switching device, when actuated, connects a positive DC offset supply to said tracks;

19. (Currently amended) An apparatus in accordance with claim 18 wherein said switching devices are include electromechanical relays.

20. (Currently amended) An apparatus in accordance with claim 18 wherein said switching devices are include solid state devices.

21. (Currently amended) An apparatus in accordance with Claim 16, wherein said controller is operative to monitor the voltage being applied to said track by way of a voltage sensor, and to then generate and transmit corresponding speed command signals to said receiver on said train.

22. (Original) An apparatus in accordance with Claim 21 wherein said controller is operative to repeat said speed command signals to said receiver by using a que technique.

23. (Currently amended) An apparatus in accordance with Claim 16, ~~further comprising at a plurality of switches to control the form of said signals being transmitted to said train~~ wherein said controller is operative to generate command messages corresponding to said selection devices in accordance with another one of said plural command protocols wherein said command messages are delivered to a track upon which said train is operating.

24. (Currently amended) An apparatus in accordance with Claim 16, wherein said controller is operative to generate digital messages corresponding to said selection devices in accordance with another one of said plural command protocols, and wherein said apparatus further comprises a transmitter to send said digital messages to a receiver located on said train.

25. (Currently amended) An apparatus in accordance with Claim 24, wherein said controller is operative to create said digital messages using a frequency shift key modulation method, ~~and wherein said receiver is operative to decode said digital messages.~~

26. (Currently amended) An apparatus in accordance with Claim 24, wherein said transmitter is operatively connected between said controller and said track, and further wherein said transmitter transmits said command signals to said track.

27. (Currently amended) An apparatus in accordance with Claim 24, further comprising a capacitor operatively connected between said transmitter and said track.

28. (Currently amended) An apparatus in accordance with Claim 16 further comprising a switching means for selecting between one of at least two of said trains that are operating on the same block of said track or between a first and second train operating on separate blocks.

29. (Currently amended) An apparatus in accordance with Claim 28 wherein said switching means is includes a pushbutton.

30. (Original) An apparatus in accordance with Claim 28 wherein said switching means is operative to actuate automatically to one of said trains whose speed is altered.

31. (Currently amended) A method of controlling operating features of a model train compliant with at least one of plural command protocols, comprising the steps of:

receiving a user selection of one of said plural command protocols;

~~providing a control box connected to a track on which at least one model train is operating, wherein said control box has a plurality of pushbuttons therein, each corresponding to a different operating feature on said train, and which are connected to a controller~~ receiving a user selection of a desired operating feature on said train to be controlled;

~~producing a train command signal by selecting a feature of said train by depressing one or more of said pushbuttons corresponding to said selected operating feature and having a form in accordance with the selected one of said plural command protocols ; and~~

delivering said train command signal from said controller to said train.

32. (Currently amended) A method of controlling operating features of a model train in accordance with claim 31 further including ~~the step of selecting the form of said command signal~~ detecting voltage of a track on which said model train is operating.

33. (Currently amended) A method of controlling operating features of a model train in accordance with claim 31, wherein said ~~step of producing a train command signal~~ includes generating a digital message.

34. (Currently amended) A method of controlling operating features of a model train in accordance with claim ~~33~~ 31, ~~further comprising the step of wherein said delivering further comprises transmitting said digital messages from said microprocessor~~ train command signal to said a track on which said train is operating.

35. (Currently amended) A method of controlling operating features of a model train in accordance with claim 34 ~~31~~, ~~further comprising the step of wherein said delivering further comprises~~ transmitting said ~~digital messages from said controller~~ train command signal to said train ~~using RF means~~ via an RF medium.

36. (Currently amended) A method of controlling operating features of a model train in accordance with claim 31, wherein said ~~step of~~ producing a train command signal includes generating a DC offset signal.

37. (Currently amended) A method of controlling operating features of a model train in accordance with claim 36 wherein said delivering further comprises the step of comprises transmitting said DC offset signal to ~~said tracks~~ a track on which said train is operating.

38. (New) An apparatus for controlling a model train operating on a track, comprising:

a transformer operatively coupled to the track and applying a voltage thereto, the transformer being manually variable to selectively alter a level of the applied voltage; and

a controller operatively connected to the track, the controller including a voltage sensor operative to measure the level of the applied voltage, the controller being operative to generate a train command message corresponding to the measured voltage level, the controller further including a transmitter operative to send the train command messages to a receiver located on the train.

39. (New) The apparatus of Claim 38, wherein the train command message further comprises a speed control message.

40. (New) The apparatus of Claim 38, wherein the model train is compliant with at least one of plural command protocols, the controller further comprising a switch input permitting user selection of one of the plural command protocols.

41. (New) The apparatus of Claim 38, wherein the controller further comprises a plurality of selection devices each corresponding to a respective operating feature of the model train.

42. (New) The apparatus of Claim 41, wherein the plurality of selection devices include pushbuttons.

43. (New) The apparatus of Claim 38, wherein said transmitter is operatively connected to the track and transmits the train command messages to the receiver via the track.

44. (New) An apparatus for controlling operating features of a model train compliant with at least one of plural command protocols, comprising:

- a user interface including a switch permitting selection of one of the plural command protocols and at least one selection device corresponding to a respective operating feature of said train;

- a controller connected to said user interface and being operative to generate a train command message responsive to actuation of the at least one selection device and formatted in accordance with a selected one of said plural command protocols; and

- a transmitter connected to said controller operative to send the train command message to a receiver located on the train for execution of the corresponding operating feature.

45. (New) The apparatus of Claim 44, wherein the at least one selection device comprises at least one pushbutton.

46. (New) The apparatus of Claim 44, wherein the transmitter is further operative to send the train command message using frequency shift key modulation.

47. (New) The apparatus of Claim 44, wherein the transmitter is operatively connected to a track on which the model train operates, the transmitter sending the train command messages to the track.

48. (New) The apparatus of Claim 44, wherein the train command messages further comprise digital signals.

49. (New) The apparatus of Claim 44, wherein the controller further comprises a voltage sensor operatively coupled to a track on which the model train operates, the voltage sensor monitoring a voltage level applied to the track, the train command message generated by the controller thereby defining a desired speed of the train.

50. (New) The apparatus of Claim 44, wherein said controller is operative to generate and apply a DC offset voltage to a track on which the model train operates.

51. (New) The apparatus of Claim 44, wherein the user interface further comprises at least one additional switch permitting selection between one of two model trains operating on a common block of track or between a first and a second model train operating on separate blocks of track.

52. (New) The apparatus of Claim 51, wherein the at least one additional switch is operative to actuate automatically to select one of the trains having altered speed.

53. (New) The apparatus of Claim 44, wherein one of the plural command protocols comprises the TRAINMASTER command control protocol.

54. (New) The apparatus of Claim 44, wherein the operating feature of the train includes at least one of horn, bell, brake, boost, front coil coupler, rear coil coupler, voice, and smoke.